LUNAR AND PLANETARY VISUALIZATION AND ANALYSIS WITH NASA'S SOLAR SYSTEM TREKS PORTALS. B. H. Day[1] and E. S. Law[2], [1]NASA Solar System Exploration Research Virtual Institute. NASA Ames Research Center. M/S 17-1. Moffett Field, CA, USA. 94035. (Brian.H.Day@nasa.gov), [2]Jet Propulsion Laboratory, California Institute of Technology. M/S 168-200. 4800 Oak Grove Dr. Pasadena, CA, USA 91109. (Emily.S.Law@jpl.nasa.gov).

Introduction: NASA's Solar System Trek online portals for lunar and planetary mapping and modeling provide web-based suites of interactive visualization and analysis tools to enable mission planners, planetary scientists, students, and the general public to access mapped data products from past and current missions for the Moon, Mars, and Vesta. As web-based toolsets, the portals do not require users to purchase or install any software beyond current web browsers. These portals are being used for site selection and analysis by NASA and a number of its international partners, supporting upcoming missions.

During the past year, significant changes have been made to The Solar System Treks suite. New portals for a range of additional bodies are now in development. New visualization and analysis tools have been integrated. New data products have been ingested and new means of generating specific data products including image mosaics and DEMs have been implemented.

The presentation will provide an overview of the current status of the portals that have been released, provide previews of portals currently under development, highlight selected use cases, and solicit input for future products and enhancements.

Moon Trek: NASA's long-standing Lunar Mapping and Modeling Portal (LMMP) has now been replaced with a new, improved portal, Moon Trek. Moon Trek provides interactive tools that incorporate observations from past and current lunar missions. Users can search through and view a vast number of lunar images and other digital products. The portal provides easy-to-use tools for browsing, data layering and feature search, including detailed information on the source of each assembled data product and links to NASA's Planetary Data System. Interactive maps, include the ability to overlay a growing range of data sets including topography, mineralogy, abundance of elements and geology. Its visualization and analysis tools allow users to measure the diameters, heights and depths of surface features, perform analyses such as lighting and local hazard assessments including slope, surface roughness and crater/boulder distribution.

Mars Trek: The project's Mars portal, has been assigned by NASA's Planetary Science Division to support site selection and analysis for the Mars Human Landing Exploration Zone Sites. This effort is concentrating on enhancing Mars Trek with data products and analysis tools specifically requested by the proposing teams for the various sites.

Upcoming Portals: A number of new portals are in development. This year, we began work on a mapping and modeling portal for Mars' moon, Phobos. We are coordinating this effort with the International Phobos/Deimos Landing Site Working Group, with landing site selection and analysis for JAXA's MMX mission as a primary driver. The Cassini Mission has commissioned a new portal for Titan, with coverage of additional icy moons of Saturn to follow.